Intelligent Beam Detectors

EB-6500E

EB-6500SE

Instruction Sheet

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Schneider Electric
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Safety Information

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

1 Intelligent Beam Detectors EB-6500E and EB-6500SE

The 6500SE (FFS06716519) with self test and 6500E (FFS06716518) are addressable reflector-type linear optical beam smoke detectors designed to operate as a component of the intelligent FX fire alarm system. The 6500SE and 6500E beam detectors are compatible with the FX-SLC-loop interface board. They operate primarily on the principle of light obscuration utilizing an Infra-Red beam. Optical beam smoke detectors are particularly appropriate for protecting buildings with large open spaces such as warehouses, atriums etc.

The 6500SE and 6500E detectors are combined transmitter/receiver units that can be directly connected to a FX-SLC loop circuit. The Infra-Red transmitter generates a beam of light towards a high efficiency reflector. The reflector returns the beam to the receiver where an analysis of the received signal is made. The change in the strength of the received signal is used to determine the alarm condition.

The 6500SE features a unique remote test capability that fully tests both the optics and the electronics of the device. An optical filter is automatically introduced in front of the optics, attenuating the returned beam and causing the unit to go into alarm. 24VDC external power is required for this test function.

Alignment of the detector is simplified with the aid of the detector’s "gunsight" targeting device. Alignment of the detector with the reflector can then be “fine tuned” with the aid of a numerical signal strength indicator.

The sensitivity of the detector can be set to between 25 % and 50 % obscuration, providing application flexibility to suit the environment in which the detector will be installed. In addition to the four fixed value alarm thresholds, there are two variable thresholds that automatically compensate for changes in the environment which could otherwise result in unwanted alarms while remaining within a known sensitivity range.

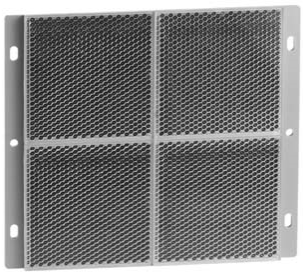
All sensitivity setting can be done with WinFxNet- configuration software.

The detector incorporates automatic drift compensation, whereby the detector will adjust its detection thresholds in line with any long term signal reduction of the beam caused by contamination of the optical surface.

The detector can be adjusted up to 10° vertically and horizontally for alignment. Where greater angular adjustment is required, the multi-mount accessory enables the detector to move through 28° vertically and 360° horizontally when ceiling mounted or up to 23° vertically and 90° horizontally when wall mounted.

1.1 Installation Accessories

BEAM-SMK Surface Mounting Box



BEAM-LRK Long Range Reflector Kit

BEAM-MMK Multi-mount Accessory

1.2 Installation recommendations

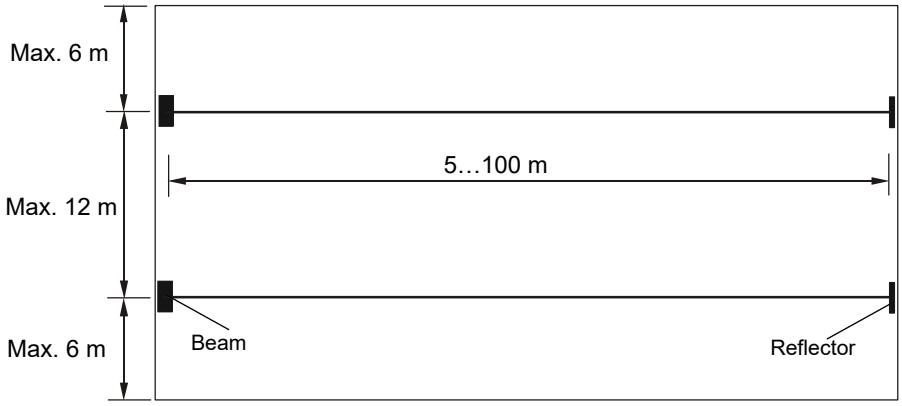
Installation should be undertaken in accordance with recognized national or international standards and codes of practice.

We would also recommend that simulated fire tests are conducted to ensure that the desired response time for a given installation are met.

Note 1	A breakaway stop on the **Tens** rotary switch needs to be removed for handling more than 99 addresses.

1.3 Placing of detectors and protected area

A typical placing has been described in the picture below.



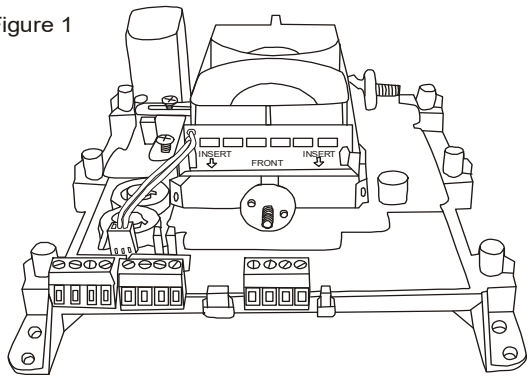
1.4 BEAMHK Heating Kit for use with the Transmitter/Receiver Unit

1.4.1 Mounting and Wiring Instructions

1. Open front cover of the transmitter/receiver unit. Refer to the installation manual provided with the beam smoke detector for instructions.

2. Plug the transmitter/receiver heater assembly PCB into the provided slot on the optical assembly as shown in Figure 1. Ensure that the connector is on the left side, and the resistors are facing outward as shown.

Figure 1



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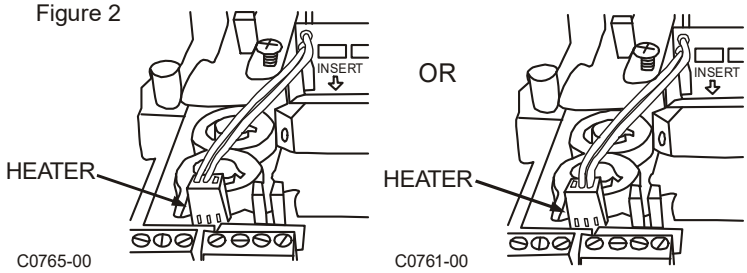
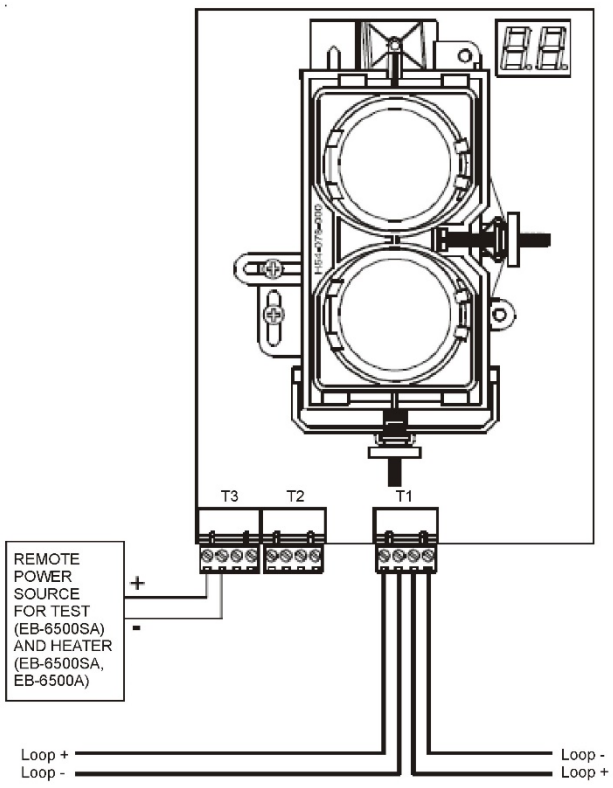
3. Plug the connector into pin-header labeled HEATER on the transmitter/ receiver PCB as shown in Figure 2. Pin orientation does not matter. Please ensure that the connector is installed properly on all three pins, or the heater will not work.

Figure 2



4. Connect the heater power supply wires as shown in Figure 3. If adding the heater kit to an existing installation, ensure that the power supply connected to the beam detector is adequately rated for the additional power consumption of the heater.

Power is provided through terminal block T3-1 and T3-2 as shown. For units with the automatic test feature, this power is provided to both the automatic test feature and the heater. See Figure 3.



5. Align/realign beam smoke detector. Refer to the installation manual provided with the beam smoke detector for alignment instructions.

Note 1	The electrical current specified is the requirement for the heater only. The power supply must be capable of powering the heater, and other devices that may be supplied through the same terminals.

Note 2	The heater is intended for the prevention of condensation only. It is not intended to increase or reduce the specified operating temperature range of the beam smoke detector.

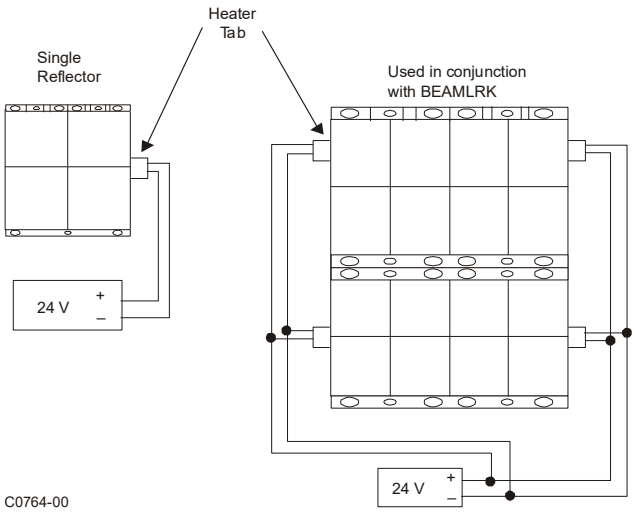
1.5 BEAMHKR Heating Kit for use with the Reflector

1.5.1 Mounting and Wiring Instructions

1. Ensure that the back of the reflector(s) is clean and free of debris.

2. See Figure 1 below (front view) for recommended mounting orientation. See steps 3 and 4 for additional information.

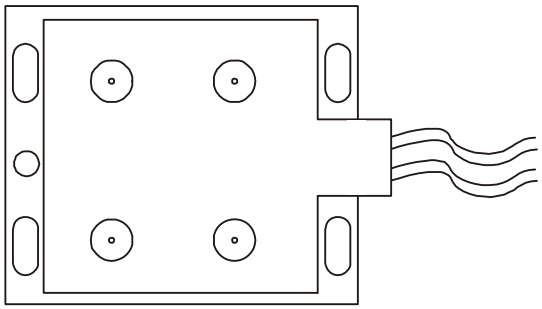
Figure 1



3. Peel off the protective backing from the back of the heater. This exposes the Pressure Sensitive Adhesive.

4. Observing proper orientation (see Figure 2), attach the heater to the back of the reflector as shown. Ensure that the four holes in the heater are aligned with the four small holes on the back of the reflector. In addition, ensure that the heater tab is on the correct side of the reflector, as shown in Figure 1. Repeat for remaining three reflectors if using BEAMLRK.

Figure 2



5. Mount the reflector(s). Refer to the installation manual provided with the beam smoke detector for instructions. For installations in conjunction with BEAMLRK, refer to BEAMLRK installation manual for proper mounting practices and considerations.

6. Attach heater wires to the power supply. For BEAMLRK, the four individual heaters are wired in a parallel. See Figure 1.

Note 1	The heater is intended for the prevention of condensation only. It is not intended to increase or reduce the specified operating temperature range of the beam smoke detector.

2 Product Codes

Product code	
EB-6500E	FFS06716518
EB-6500SE	FFS06716519
BEAM-LRK Long Range reflector kit	FFS06716507
BEAM-SMK Surface Mount accessory	FFS06716508
BEAM-MMK Multi-mount accessory	FFS06716509
BEAMHK Detector heater	FFS06716516
BEAMHKR Reflector heater	FFS06716517